intermaxillary is much longer than the length of the intermaxillary.

In some skulls the nasal bones are the same length as the upper suture of the frontal one, as in *C. natalensis*, *C. sylviculturix*, and *C. Ogilbyi*. In *C. altifrons*, according to Dr. Peters's figure, they are shorter. In *C. coronatus* and *C. rufilatus* they are much shorter—only about two-thirds the length. In one skull of *C. Grimmius* they are longer, and in another skull shorter, and in *C. longiceps* much longer.

The above observations are made only on a few, sometimes only on one specimen of the species; and when I have three or four specimens of the same species, as is the case with *C. Grimmius*, the skulls present some variations in the form of the nasal bones and in the length of the intermaxillaries as above noted.

Dr. Peters figures as the skull of a young female of *C. altifrons* a skull of a very different form from that of the skull with the horns of the male above referred to. I have not observed such a difference in the skulls of the females of any of the species of *Cephalophus* that have occurred to me. I have some doubt if it does belong to the same species, as the figure of the young female animal is very like the skull of a female *C. Grimmius*, which is an animal that has ascending horns in the male.

MISCELLANEOUS.

On the Pollen-grains of Ranunculus arvensis.

By George Gulliver, F.R.S.

Finding, on reference to my note-book entries (of no less than five different examinations in the course of four years), that the pollen-grains of *Ranunculus arvensis* always appeared to differ remarkably from those of its British allies, I have recently examined the pollen of these plants again. The difference now to be described appears so constant and remarkable as to deserve a place in the descriptions of this species.

The examinations include all the British yellow-flowered Ranunculeæ with divided leaves, except *R. parviflorus*. This species I have not seen growing. All the others are as common about Edenbridge as elsewhere. Even *R. hirsutus*, which Prof. Babington marks "Waste land and corn-fields, rare," grows abundantly in patches in some of our lanes or by-roads; but happily the very noxious weed *R. arvensis* scarcely intrudes into pastures, though it is a sad pest in some of our stiff arable land, and too well known to our husbandmen under the name of the "hedgehog."

The pollen of each species was repeatedly compared in the same stage of development—a necessary precaution, the neglect of which has too often led to perplexing discrepancies in botanical descriptions. In the following measurements the average sizes only are mentioned, as made from the pollen shaken out of the anthers on to a dry piece of glass, and viewed by transmitted light.

Ranunculus auricomus: pollen-grains round and smooth, and $\frac{1}{800}$th of an inch in diameter.

R. acris: pollen-grains round and smooth, and $\frac{1}{840}$th of an inch in diameter.

R. repens: pollen-grains round and smooth, and $\frac{1}{666}$th of an inch in diameter.

R. bulbosus: pollen-grains round and smooth, and $\frac{1}{727}$th of an inch in diameter.

R. hirsutus: pollen-grains smoothish, with three depressed scars, and $\frac{1}{885}$th of an inch in diameter.

R. arvensis: pollen-grains round, rough, and so much larger than those of the other species as to measure $\frac{1}{440}$th of an inch in diameter. The roughness remains when the pollen-grains are treated either with dilute acids or water.

Hence the roughness and comparatively large size of the pollen-grains of *R. arvensis* are very evident, and this curious difference is certainly constant in our plants. It may be easily seen under a magnifying power of fifty diameters. When much more magnified, some inequalities may appear on the surface of the pollen-grains of the five preceding species. An examination of the pollen of *R. parviflorus* would be interesting.

On the Feathers of Dinornis robustus, *Owen.*

By W. S. Dallas, F.L.S., Keeper of York Museum.

The acquisition by the Yorkshire Philosophical Society of a specimen of *Dinornis robustus*, Owen, in so perfect a state of preservation that it retains even portions of the muscular and integumentary systems, enables me to describe at least a part of the structure of the feathery covering of this remarkable bird, and thus to throw some further light upon its affinities among birds with which we are acquainted in the living state. The general condition of the skeleton was described by Mr. Allis in a paper read before the Linnean Society in June last; and Professor Owen has since made use of one or two portions of it for the completion of his description of the species, in a paper communicated to this Society; but the fact of the occurrence of the feathers, however imperfect, of a bird which, as far as our information goes, has long been extinct, seems to call for some special notice.

At first sight, indeed, it would seem that the fresh condition of many parts of this skeleton, and the preservation of traces of the soft parts, might warrant us in supposing that many years have not elapsed since the bird to which it belonged wandered over the hills of Otago; but all possibility of drawing from these circumstances any conclusions as to the period of its death is set aside by the fact that other parts of the skeleton are in a state of decay which would apparently require a free exposure to the weather for many years for its production.

The portion of skin which bears the remains of feathers covered the greater part of the flat, rhombic region of the pelvis immediately above the commencement of the tail, and extended, on the left side,